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“Knowledge, Awareness and Attitude Toward COVID-19 Among Radiological Department Students in Najran University”

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Abstract:

It is important to know the individual and his awareness of the preventive measures and procedures to control epidemics such as CoronaVirus Disease 2019 (COVID-19), and platforms differ for communicating directives to individuals.This study aimed toassess knowledge, awareness, and attitude toward COVID-19 among radiological department studentsat Najran University**.** This study was a descriptive cross -section study conducted in the department of radiological science, Najran University, using an online questionnaire. The questionnaire contains9 knowledge and 1 awareness, and 3 attitude items. Statistical analysis was performed by using Microsoft excel.74 total students participated in this study. The number of males is equal to the number of females, 73% (n=54) were aged 22-24 years, 91.9% (n=68) participants were aware of the concept of hand hygiene, 77% (n= 57) aware of the standard infection control precautions within the radiology department and 50% (n=37) It is not necessary to wear a mask for children underage.The study achieves that most study participants have some knowledge about COVID-19. The average score of COVID-19 knowledge was 72.86%. The study recommended that is a dire need for training, spread of publications, knowledge and learning of correct practices about infection control, and other updates to COVID-19.

Chapter 1: Introduction

In 31 December 2019, the WHO China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. As of 3 January 2020, 44 patients with pneumonia of unknown etiology have been reported to WHO by the national authorities in China. Of the 44 cases reported, 11 are severely ill, while the remaining 33 patients are in stable condition. According to media reports, the concerned market in Wuhan was closed on 1 January 2020 for environmental sanitation and disinfection. [(1)]

Corona Virus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2).[(2)]

Current evidence suggests that COVID-19 spreads between people through direct, indirect (through contaminated objects or surfaces), or close contact with infected people via mouth and nose secretions. These include saliva, respiratory secretions or secretion droplets. [(3)] These are released from the mouth or nose when an infected person coughs, sneezes, speaks or sings, for example. People who are in close contact (within 1 meter) with an infected person can catch COVID-19 when those infectious droplets get into their mouth, nose or eyes. [(3)]

To avoid contact with these droplets, it is important to stay at least 1 meter away from others, clean hands frequently, and cover the mouth with a tissue or bent elbow when sneezing or coughing. When physical distancing (standing one meter or more away) is not possible, wearing a fabric mask is an important measure to protect others. Cleaning hands frequently is also critical. The interval between exposure to the virus and the onset of symptoms ranges from two to 14 days, with an average rate of five days. [(3)]

Common clinical signs and symptoms of COVID-19 include fever, dry cough, dyspnea, and fatigue, Loss of sense of taste or smell. [(4)] Uncommon symptoms are diarrhea, rhinorrhea, abdominal pain, anorexia, headache, and sore throat. [(5)] These symptoms are usually mild and start gradually. Some people become infected with only very mild symptoms. Older patients with cardiovascular disease, hypertension, and diabetes are more likely to have a respiratory failure or rapid progression to organ dysfunction or death in severe cases. [(4)]

Decisive global cooperation and global efforts have taken place to prevent the spread of the virus further, as specific preventive strategies have been applied, such as quarantine, self-isolation and social distancing, and if an individual is in contact with the virus, this person will be transferred to a health facility that specializes in symptoms. [(6)]

Radiology preparedness is a set of policies and procedures directly applicable to imaging departments designed to, achieve sufficient capacity for continued operation during a health care emergency of unprecedented proportions, support the care of patients with COVID-19, and maintain radiologic diagnostic and interventional support for the entirety of the hospital and health system.[(7)]

A portion of people in general sees too minimal about this strain of the Coronavirus when seen against the extent of its expected danger. This need and inadequate knowledge are disturbing and the general wellbeing organizations must react

forcefully. Besides, it has been recorded that understanding the view of the overall population to irresistible sickness dangers would add to the capacity of the Ministry of Health (MOH) to decide knowledge gap and awareness to be tended to in general wellbeing mindfulness crusades. Saudi MOH has submitted a great deal of assets toward successfully containing the episode, forestalling COVID-19, and advancing wellbeing through government funded schooling. The MOH endeavors calling for aggregate duty by the general wellbeing network in King of Saudi Arabia (KSA) to raise public mindfulness and information toward this sickness, more public association is required and this nearly done by numerous assets of mindfulness techniques.[8]

This study was conducted to evaluate knowledge, attitude and awareness of radiological students in Najran University about COVID-19.

1.1 Problem of the study:

There is an expansion in the spread rate, as it affects all people particularly among the old and those with ceaseless illnesses. A plenitude of ignorance about preventive techniques for malady. Unfortunately, up until this point, there is no particular medication treatment or immunization.

1.2 Objective of the study:

1.2.1 General objective:

The aimed of this study to assess knowledge, awareness and attitude toward COVID-19 among radiological department students in Najran University during period from September toNovember 2020.

1.2.2 Specific objectives:

1- Assess the knowledge of radiological students in Najran University about COVID-19.

2- To evaluate the attitude of radiological students department in Najran University towards COVID-19.

3- To assess the awareness of radiological students department in Najran University towards COVID-19.

1.3 Hypothesis:

-Is the radiological science students have enough knowledge and aware about COVID-19?

- Is the radiological science students have attitude about COVID-19?

1.4 Overview of the study:
Chapter 1: Introduction.
Chapter 2: Literature review.
Chapter 3: Methodology.
Chapter 4: Results.
Chapter 5: Discussion, Conclusion and recommendation.
References.
Appendix.

Chapter 2: Literature review

2.1 Coronavirus:

Coronaviruses are a generous family of viruses that can spell disaster for animals and humans. It is often that a group of corona viruses in humans cause respiratory diseases ranging in severity from the common cold to more severe diseases such as Middle East respiratory syndrome Corona Virus (MERS-CoV) and SARS-CoV-2. As the modern corona virus causes COVID-19 disease. (9)

2.2 Coronavirus structure

Coronaviruses are large, roughly spherical particles with unique surface projections. (10) Their size is highly variable and generally is an average diameter of 120 nm. Extreme sizes are known from 50 to 200 nm in diameter. (11)

The total molecular weight is on average 40,000 kDa. They are enclosed in an envelope embedded with a number of protein molecules. (12)The lipid bilayer envelope, membrane proteins, and nucleocapsid protect the virus when it is outside the host cell. (13)

The viral envelope is made up of a lipid bilayer, in which the membrane (M), envelope (E) and spike (S) structural proteins are anchored. (14) The ratio of E:S:M in the lipid bilayer is approximately 1:20:300. (15)

The E and M protein are the structural proteins that combined with the lipid bilayer shape the viral envelope and maintain its size. (16)

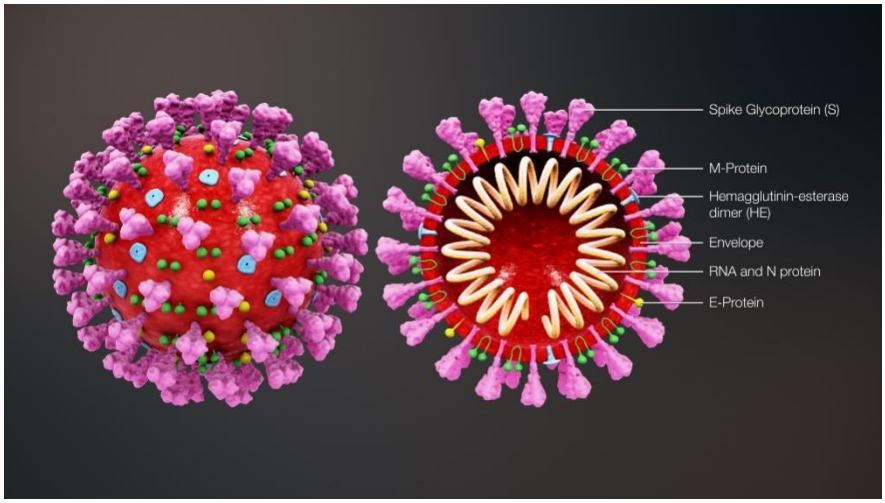

Figure 2-1: Cross-sectional model of a coronavirus.(17)

2.3 COVID-19 disease

COVID-19 disease is a common disease caused by the last discovered virus of the Coronavirus strain. This new virus and its illness were vague and unknown before the outbreak began in the Chinese city of Wuhan in December 2019.Today, COVID-19 has turned into a pandemic affecting many countries of the world. (9)

2.4 Signs and symptoms of COVID-19

Clinical signs and symptoms of COVID-19 are different, from one person to another as is basic with infections, there is a lateness, known as the incubation period, (between the moment exposure a person the virus becomes infected and the

onset symptoms) is right now assessed estimated to be between one and 14 days. A great many people experience symptoms inside two to seven days after exposure. One of the primary and most common symptoms of COVID-19 disease: fever followed by a dry cough and tiredness.Less common symptoms: Pains and aches, Sore throat, Diarrhea, a headache, Loss of sense of taste or smell and a rash or discoloration of the fingers or toes, Dangerous symptoms: Difficulty breathing or shortness of breath, Chest pain or pressure and Loss of ability to speak or move, its severity varies from person to person. Elderly patients with cardiovascular problems and pain, hypertension and diabetes are bound to develop respiratory failure or rapid progression to organ dysfunction or death in severe cases. (9)

A major challenge to containing the spread of SARS-CoV-2 is that asymptomatic and pre-symptomatic people are infectious, few people with the infection do not have symptoms.(18)

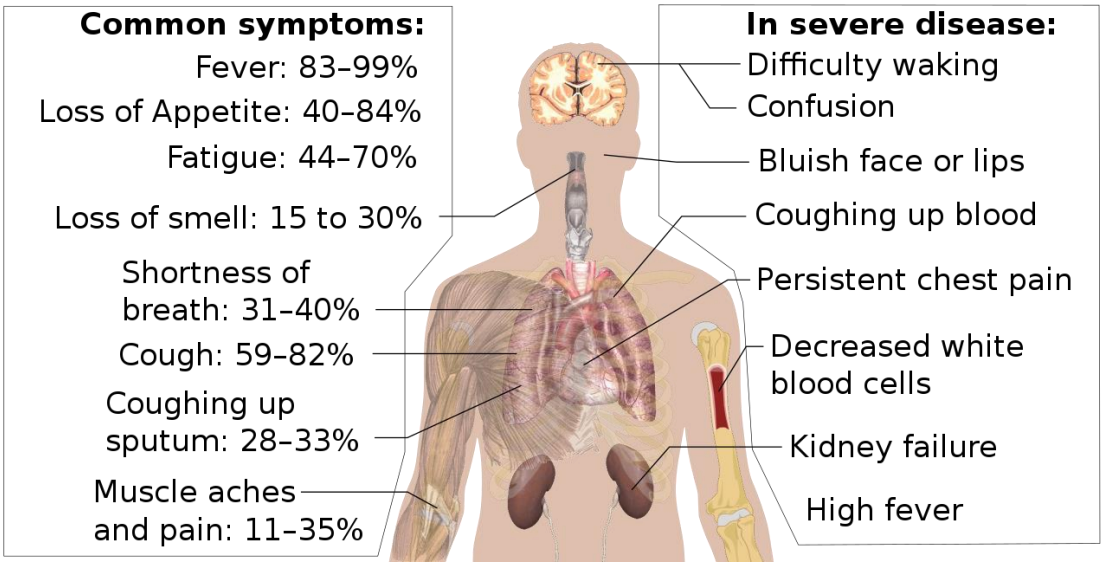

Figure2-2 : Signand symptoms of COVID-19.(19)

2.5 Complication of COVID-19

Some people (about one in six) suffers complications, some of which are life-threatening. Many of these complications may be caused by diseases called cytokine release syndrome or cytokine storm. In this case, the infection triggers immune system, flooding the body with inflammatory proteins (called cytokines). They can kill tissues and damage organs, including lungs, heart, and kidneys. (20)

However,COVID-19 complications may include the following (20):

- Acute Respiratory Failure (20)

  Lungs may not be able to pump enough oxygen into the blood, or it may not be able to get rid of carbon dioxide. These two problems may occur at the same time. (20)

- Pneumonia (20)
  The surge in pneumonia cases is the first sign of COVID-19 in China.(20)

Scientists who have studied images of the lungs of patients with severe COVID-19 found that they were filled with fluid, pus and cell debris. In these cases, the patient's body cannot transfer oxygen to the blood to keep its system functioning properly. [20]

- Acute Respiratory Distress Syndrome (ARDS) [20]

In the early stage of the COVID-19 outbreak in China, acute respiratory distress syndrome (ARDS) was one of the most common complications. [20]

With ARDS, the lungs are so severely damaged that fluid begins to seep into the lungs. As a result, it is difficult for the body to absorb oxygen into the blood. [20]

- Acute Liver Injury

Approximately 20–30% of people who present with COVID-19 have elevated liver enzymes reflecting liver injury. [21][22]

Acute liver injury and liver failure are life-threatening complications.

- Cardiovascular complications may include heart failure, arrhythmias, heart inflammation, and blood clots. [23]
- Death. [23]

2.6 Transmission of COVID-19

The spread of COVID-19, it spreads from person to person through several different modes, mainly when people are close to each other. [24] It spreads very easily and sustainably, and an infected person usually infects 2 to 3 other people. [24] It is more infectious than flu, but not as good as measles. [24] [25]

The disease seems to spread mainly after an infected person breathes, coughs, sneezes, talks or sings.[24] Actions such as these produce contaminated droplets, which travel through the air, land on the mouths or noses of others close by, and can be inhaled into the lungs, thereby causing new infection.[24] Airborne transmission occurs particularly in crowded and less ventilated indoor spaces, which are particularly effective for transmitting the virus, such as restaurants, nightclubs, public transport and gatherings such as funerals.[24][26] It also can occur in the healthcare setting, where certain medical procedures performed on COVID-19 patients generate aerosols. Tracheal intubation is an example of an aerosol-generating procedure that carries increased risk of transmission from an infected patient. [27]

It may be possible that a person can get COVID-19 through indirect contact by touching a contaminated surface or object, and then touching their own mouth, nose, or possibly their eyes, though this is not thought to be the main way the virus spreads, and it has not been conclusively demonstrated. [27]

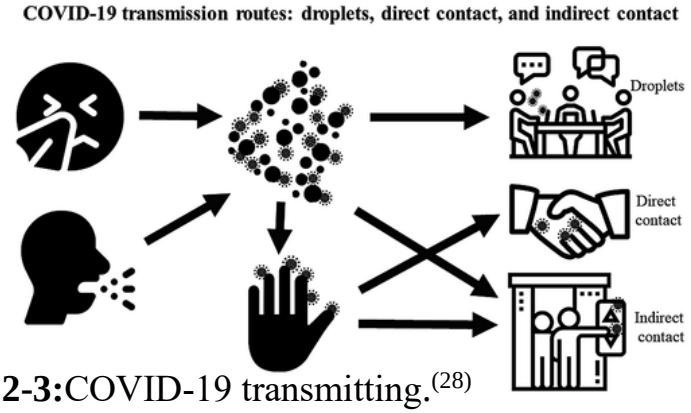

Figure 2-3:COVID-19 transmitting.[28]

The transmission drivers of COVID-19 infection include short-distance, large droplet transmission (diameter> 5 µm, transmission <1 meter). Close, unprotected direct contact and indirect contact with contaminated surfaces. [28]

2.7 Prevention methods

Preventive measures to reduce the chance of infection include staying at home, wearing a mask in public places, avoiding crowded places, keeping distance from others, washing hands with soap and water, maintaining good respiratory hygiene, and avoiding touching eyes, nose or mouth without washing hands.[29]

2.7.1 Personal protective equipment

- Face masks

The face covering will limit the volume and travel distance of the exhalation droplets scattered during speech, breathing and coughing. In the case of not wearing a mask, the CDC, WHO and NHS recommend using a tissue to cover the mouth and nose when coughing or sneezing. If there is no tissue available, it is recommended to use the inside of the elbow. [30]

- Social distancing

In public health, social distancing, also called physical distancing, is a set of non-pharmaceutical interventions or measures intended to prevent the spread of a contagious disease by maintaining a physical distance between people and reducing the number of times people come into close contact with each other. [30]

Distancing guidelines also include that people stay at least 2 meters (6.6 ft.) apart. [30]

- Hand-washing and hygiene

TheWHO also recommends that individuals frequently wash their hands with soap and water for at least 20 seconds. The CDC recommends the use of alcohol-based hand sanitizer and at least 60% alcohol, but only when soap and water are not readily available. [30]

2.7.2 The equipment to keeps healthcare workers safe

The most important thing is to wash hands thoroughly with soap and water. Use a hand gel with 60% or higher alcohol concentration if soap and water are not available. For appropriate respiratory protection, the current recommendation from CDC is for healthcare workers to wear a gown, gloves, N-95 or higher-level respirator, and eye protection for patients with presumed or confirmed COVID-19. After removing the equipment carefully to avoid contamination, wash hands again. Unless the CDC tells otherwise, reusing personal protective equipment is not recommended. [31]

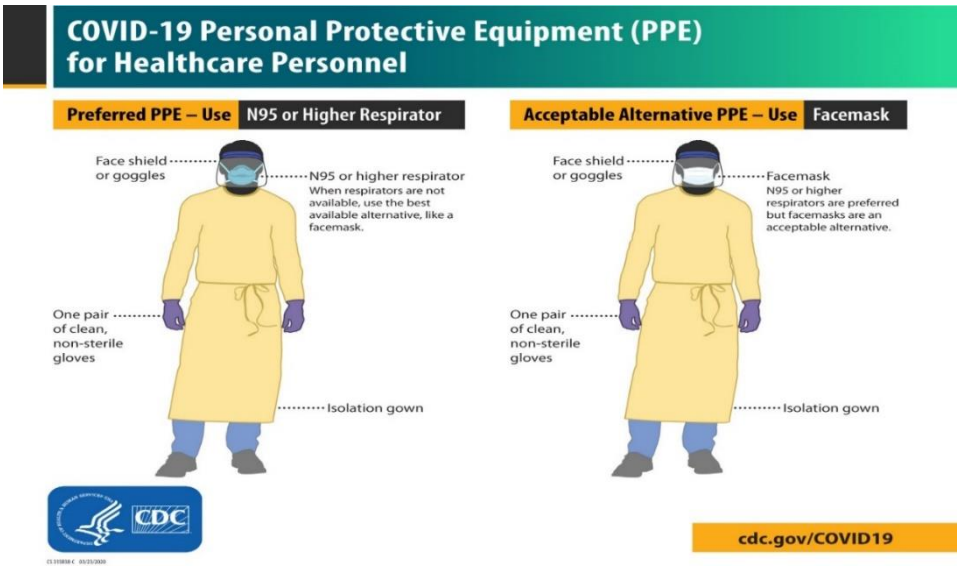

Figure 2-4: Personal protective equipment for Health care professionals. [32]

2.8 Radiology department in Najran University Protocol for COVID19

In the context of developments in the global situation of the spread of COVID-19 and the necessity to take measures to prevent the spread of the disease. His Excellency the Minister of Education instructed the necessity for universities to take the necessary steps towards this disease and set up a plan to prevent the spread of the disease, especially since universities are places where large gatherings are occurring.

The Najran University prevention plan for Coronavirus confirms that:

- Fully adhering to MOH plan and procedures regarding combating this disease.
- Examination for teaching staff and students at entering the universityand directing those who show symptoms of the disease for medical examination.
- Providing sterilizers and masks at the entrance to university, test places and availability of hand soap in toilets.
- It applied social distancing and placed a distance between one person to another 1-2 meters in both waiting areas and test places.
- Distributing leaflets to educate about how to combat COVID-19.
- Download and activate the (Tawaklna) and (Tabaud)of all students.
- Chairs designated for seating, allow seating for one student just It is forbidden to exchange tools and pens between students during the exams.
- Close all facilities such as cafeteria and prayer area.

2.9COVID-19 in KSA and its efforts to deal with it

March 2, 2020, KSA announced the first case, which is the case of a Saudi citizen returning from Iran through Bahrain. On March 8, 2020, KSA took its most important step in preventing entry and exit from its governorate. Followed by the suspension of work in all government departments and private institutions, with the exception of basic facilities to provide security, supply and necessary services. The MOH announced an application (Sehhaty) to enhance the prevention of the COVID-19 and reduce the spread. The MOH said that it is an application aimed toprovide health care to citizens and residents referred to home isolation and strengthening The Ministry of Education, in turn, announced the temporary suspension of studies in all regions and governorates of KSA, starting Monday, March 9, 2020, and on March 23, 2020: King Salman issued an order imposing a curfew starting from 7 pm and continuing until 6 am for a period 21 days in all regions of KSA ,

and at that time the Ministry of Education continued distance education for all educational levels until the present day, corresponding to September 22, 2020 despite the lifting of the ban and the gradual return to normal life by taking preventive measures to preserve the safety of citizens.(33)

2.10 Statistics of KSAforCOVID-19

On March 25, 2020, just over three weeks after the Kingdom's first case, COVID-19 claimed its first victim in KSA, a51-year-old of nationality Afghani who died in Madinah. Next, the toll of deaths and cases began to rise. (34)

The number of new daily cases in KSA would see three distinct peaks, hitting a high on June 17, 2020, when 4,919 were reported in one day.(34)

Statistics of COVID-19 in KSA, November 20, 2020, Cases infected with corona virus cases 355.000, deaths cases 5.729and the number of recoveries cases 342.000, and this statistic is subject to increase or decrease. (34) (Appendix A)

2.11 Steps to perform an expanded COVID-19 examination

Extended testing is one of the initiatives implemented by KSA to control the emerging corona virus .(35)

Testing for COVID-19 involves inserting a six -inch long swab into the cavity between the mouth and nose (nasopharyngeal swab) for fifteen seconds and rotating it several times. The swabbing is then repeated on the other side of the nose to make sure enough material is collected. The swab is then inserted into a container and sent to a lab for exam.(36)

The plan aims to allow citizens and residents to benefit from extended testing to assess the spread of COVID-19 at many fixed and mobile sites throughout KSA.(35)

TheMOH announced plans to start the third phase of its expanded COVID-19 test. It aims to assess the wide spread of COVID-19 in KSA. This step is the continuation of precautionary and preventive measures to curb the spread of the virus and maintain the health and safety of citizens and residents. (37)

Figure 2-5 : Demonstration of a nasopharyngeal swab for COVID-19 testing.(38)

2.12

Previous studies:

Table 2-1 Summary of previous studies:

Researchers	Years of Publication	Country	Sample	Population	Result
Hanady Elyas Osman[39]	2020	KSA	90	Students and teaching staff in Alghad international college	The percentage of awareness about the procedure of hand hygiene was 96.6%, degree of participant awareness of precautions and infection control among COVID-19 were 81.1%. Concerning attitude, more than 90% of students and staff exhibited a positive attitude toward COVID-19.
Al-Hanawi et al[40]	2020	KSA	3388	General population	The majority of the study participants were knowledgeable about COVID-19. However, the results showed that men have less knowledge, less optimistic attitudes, and less good practice toward COVID-19, than women.
Bhagavathula et al[41]	2020	United Arab Emirates	529	Health Care Workers HCW	A significant proportion of HCWs had poor knowledge of its transmission 61.0% and symptom onset 63.6% and showed positive perceptions of COVID-19. Factors such as age and profession were associated with inadequate knowledge and a poor perception of COVID-19.
Almofada et al[42]	2020	KSA	6000	General population	Most respondents 84.93% of the population reported awareness of the virus, 78.78% reported a belief that the virus leads to death, 89.47% reported a belief that 14 days is the incubation period, and 93.73% were aware of the possibility of asymptomatic carriers.

Chapter 3: Methodology

3.1 Study design:

The design of the study was descriptive quantitative cross section study conducted in Najran university from September to November2020 to assess knowledge, awareness and attitude toward COVID-19 among radiological department students.

3.2 Area of study

The study was carried out in Najran University, Najran, Saudi Arabia.

Najran is a region of Saudi Arabia, located in the south of the country along the border with Yemen. Its capital is Najran.

3.3 Study population and sampling:

3.3.1 The population:

Radiological science students (male and female) there ages range from (22 to 27) years old from level 3 to level 9.

3.3.2 The sample:

74 students of faculty of applied medical science department of radiological science 37 maleand 37female was chosen randomly.

3.3.3 Inclusion criteria:

Male and female students of faculty of applied medical science department of radiological science, students aged between (22-27) years, from level 3 to level 9.

3.3.4 Exclusion criteria:

Students in the internship period and whoaged over 27 years old were excluded from the study.

3.4Study variable:
3.4.1 Dependent variable
COVID-19 disease.

3.4.2 Independent variable
1-Knowldage, attitude and awareness of radiological students department.
2- Students gender.
3- Students age.
4-Students level.

3.5 Method of data collecting:

Data was collected by online multiple-choice questionnaire. This questionnaire was posted to radiological science students. (Appendix B)

3.6 Data analysis:
Statistical analysis was performed by using the Microsoft excel.

3.7 Ethical consideration:
Students participation in this questionnaire was voluntary, reduce the scientific plagiarism through rewrite the sentence and write references and names researchers on every piece of information.

Chapter four: The results

74 male and female students of the radiology department at Najran University of various ages were subjected to assess the extent of their knowledge,awarenessand attitudes towards COVID-19 disease, and the result was distributed as follows:

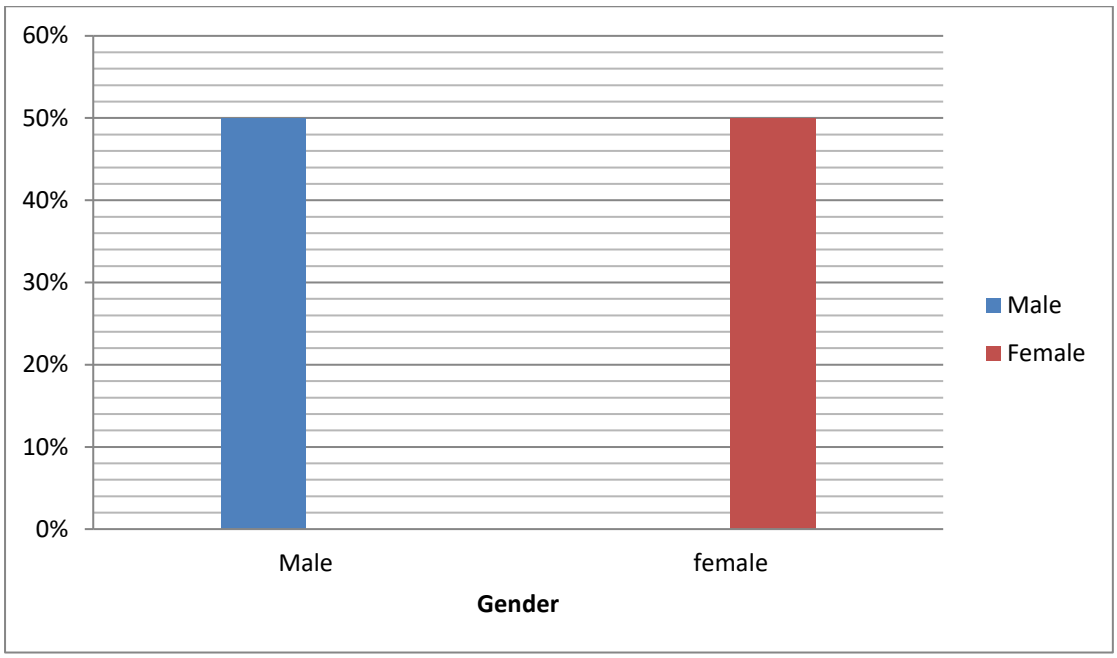

Figure (4-1): Shownthe percentage distribution of students gender.

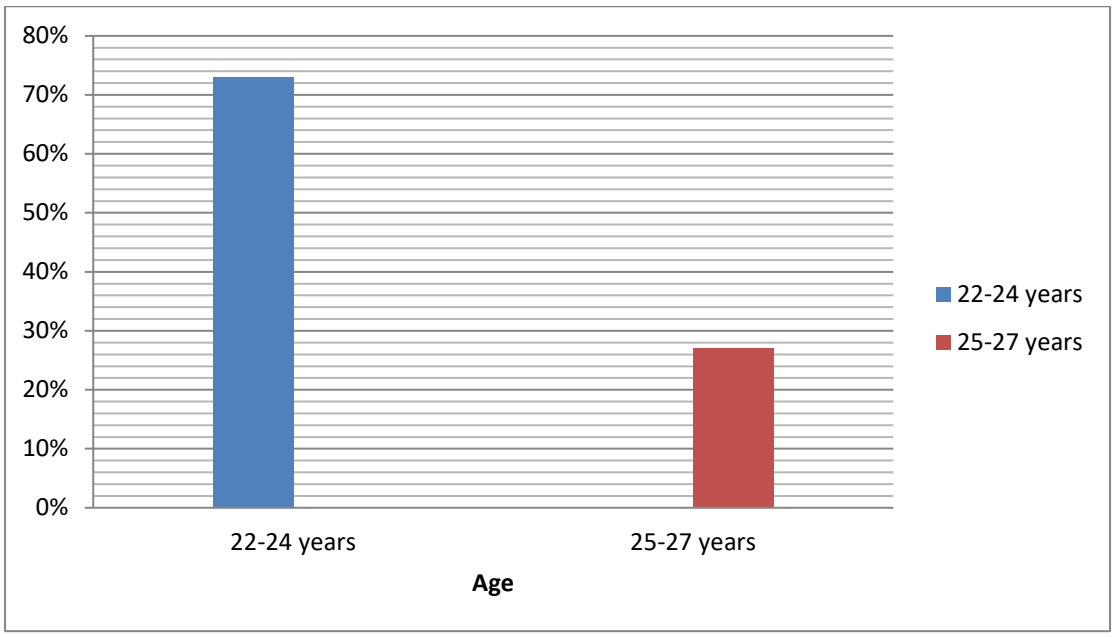

Figure (4-2): Shownthe percentage distribution of students age.

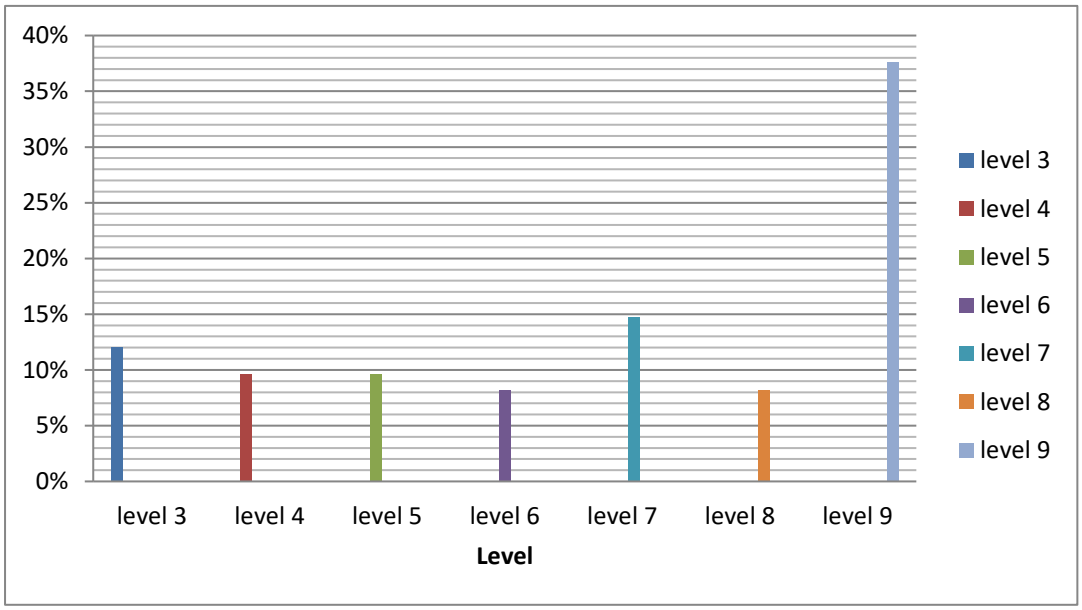

Table (4-1):Knowledge and awareness of the radiology department students about the prevention of COVID-19:

The questions
Are you aware of the stander infection control precautions within the radiology department?
Do you have a sufficient knowledge about hand hygiene?
What is the minimum time needed for hand washing is?
Coronavirus infection may spread to all family members if one of its members is infected?
Corona virus is easy to spread from one person to another?
How much physical distance do you leave between you and others currently?
Do you know about the guidelines established by world health organization (WHO) to deal with COVID-19 or suspected patients?
Is it necessary to wear the mask for children under the age of two years?
Is it possible to catch the infection from a person who does not show symptoms of the disease?
How long is the incubation period for the virus for an infected person / the isolation period authorized by the Ministry of Health?

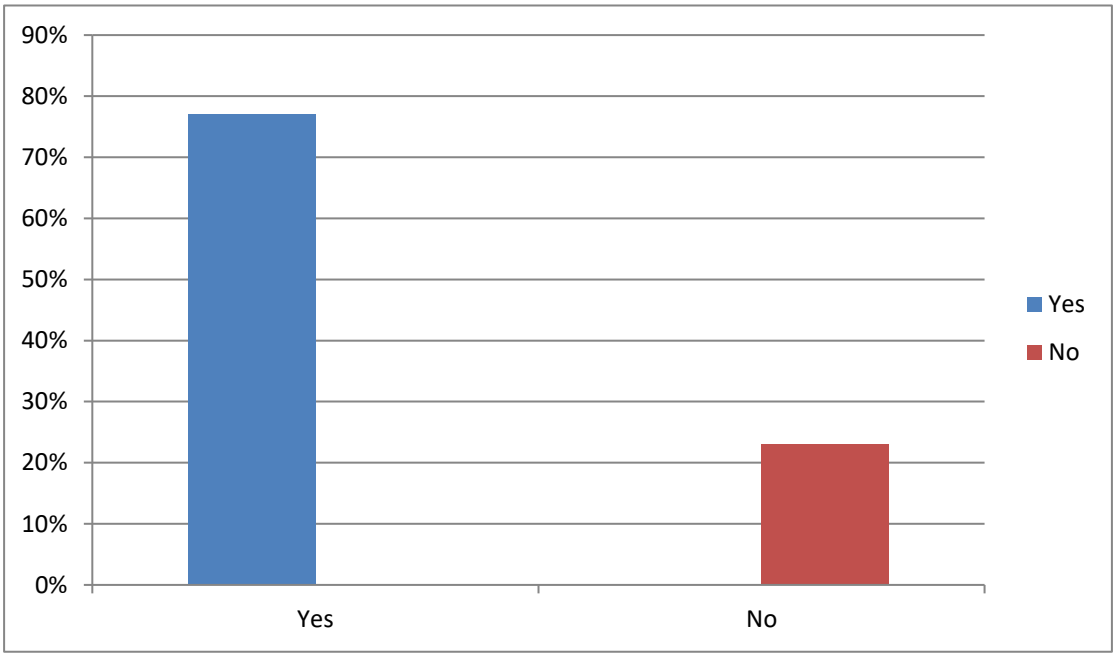

Figure (4-1-1): Shows the percentage for aware about the standard infection control precautions within the radiology department.

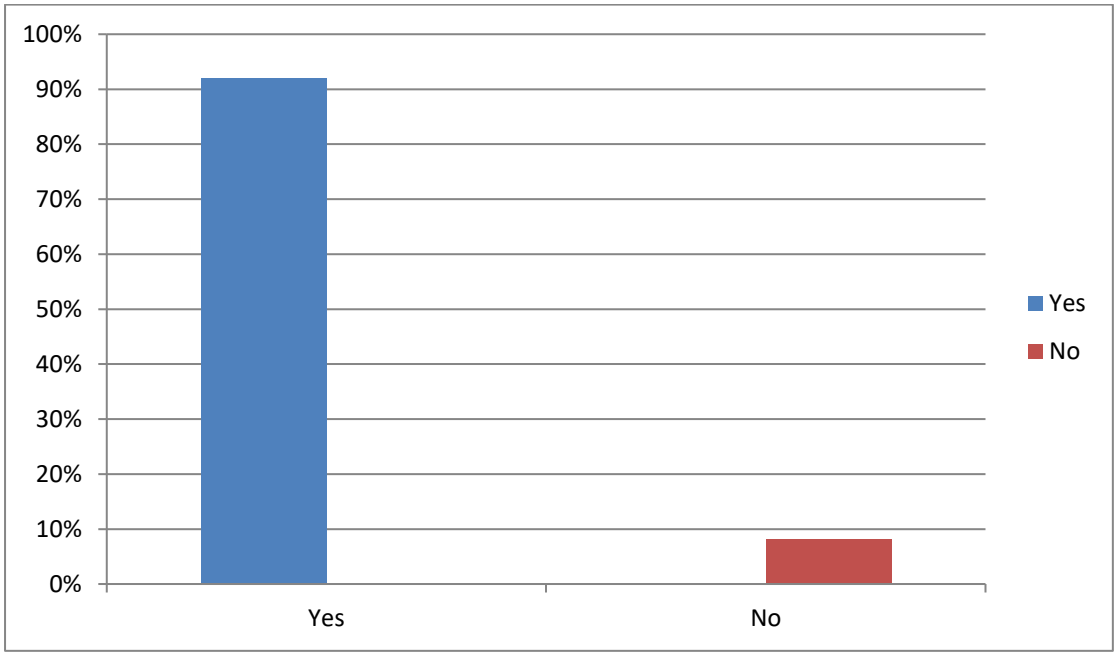

Figure (4-1-2): Showsthe percentage for Knowledge about hand hygiene.

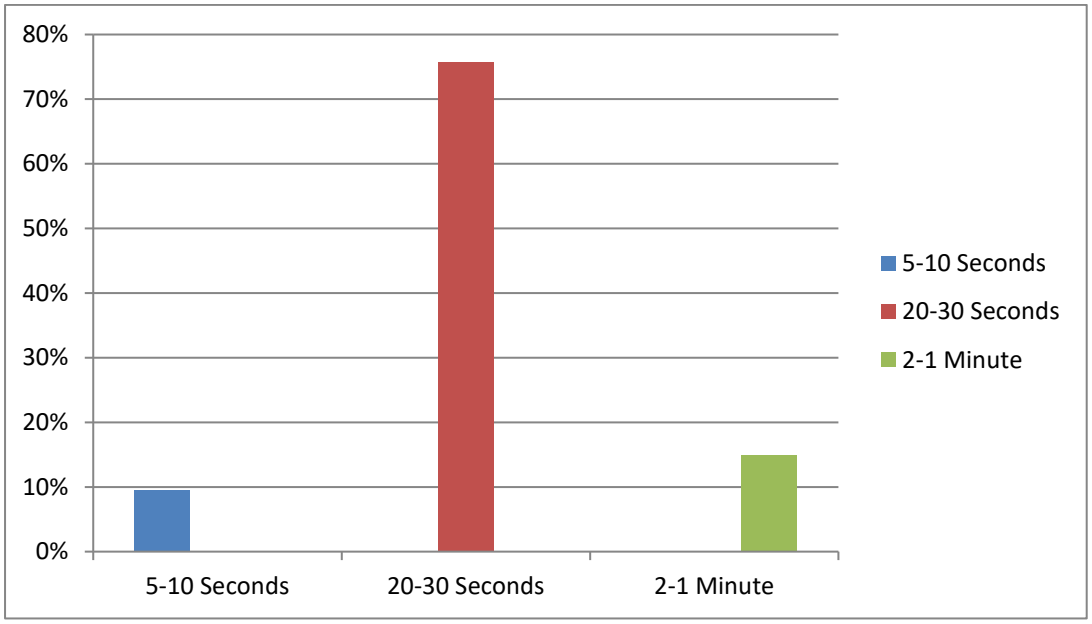

Figure (4-1-3): Shows the percentage for Knowledge about the minimum time needed for hand washing.

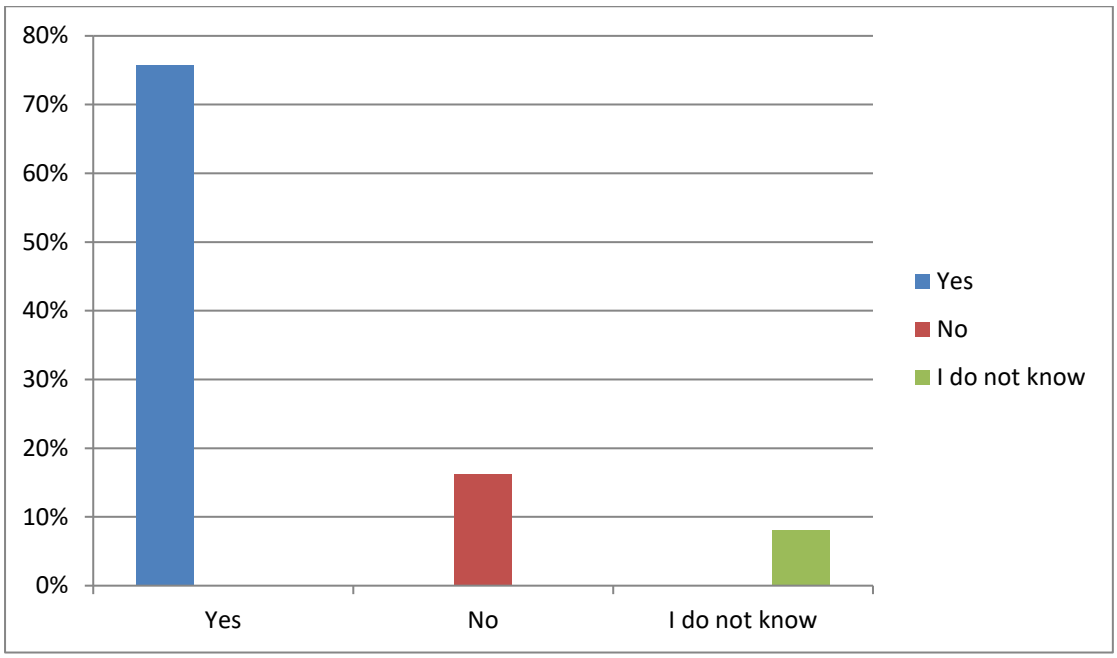

Figure (4-1-4): Showsthe percentage for Knowledge about coronavirus infection may spread to all family members if one of its members is infected.

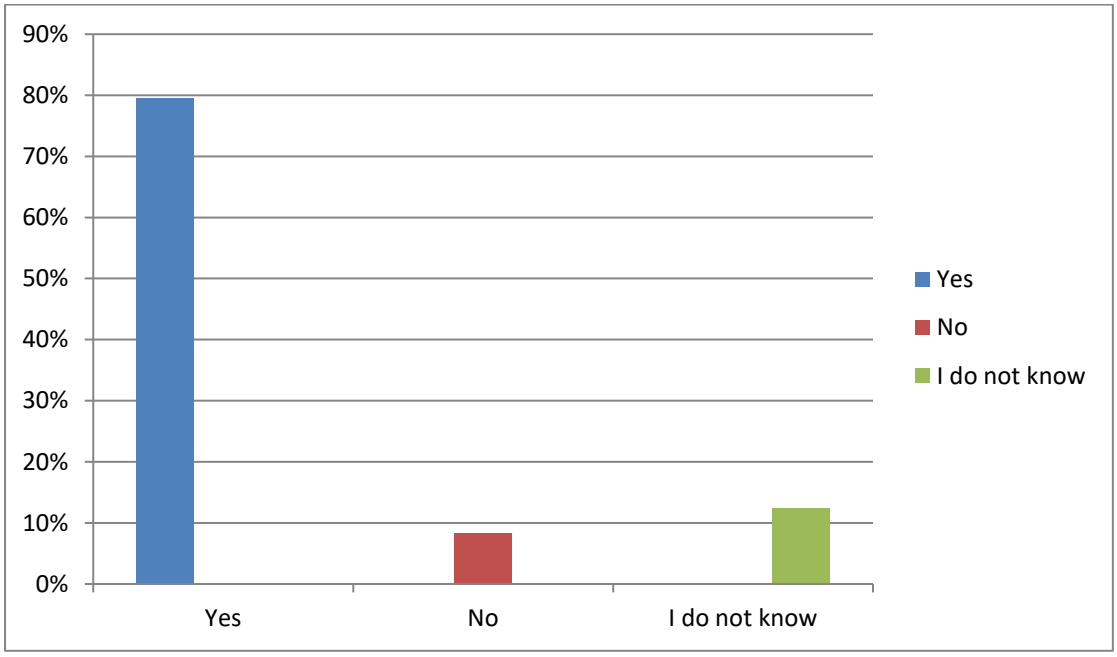

Figure (4-1-5): Showsthe percentage for Knowledge about corona virus is easy to spread from one person to another or no.

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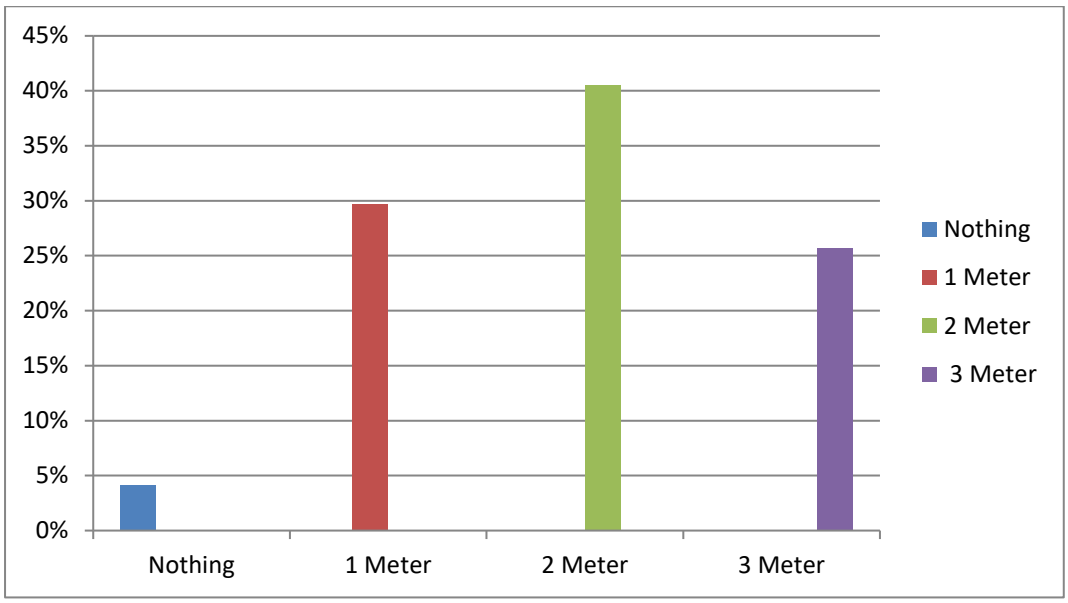

Figure (4-1-6): Shows the percentage for Knowledge about physical distance do you leave between you and others currently.

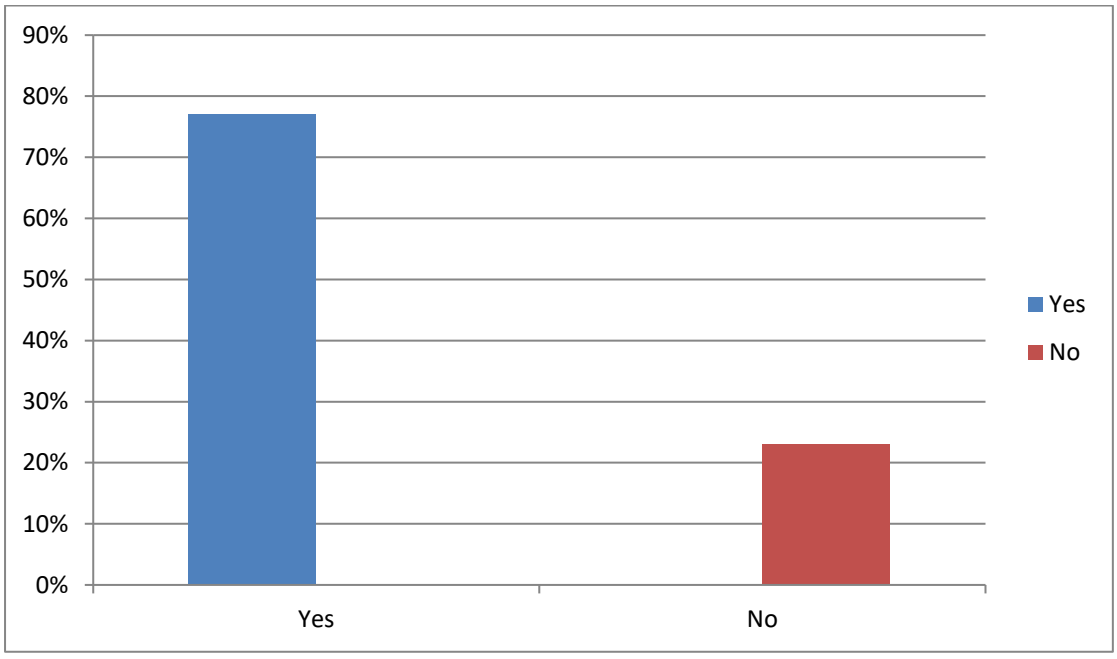

Figure (4-1-7): Showsthe percentage for Knowledge about the guidelines established by WHO to deal with COVID-19 or suspected patients.

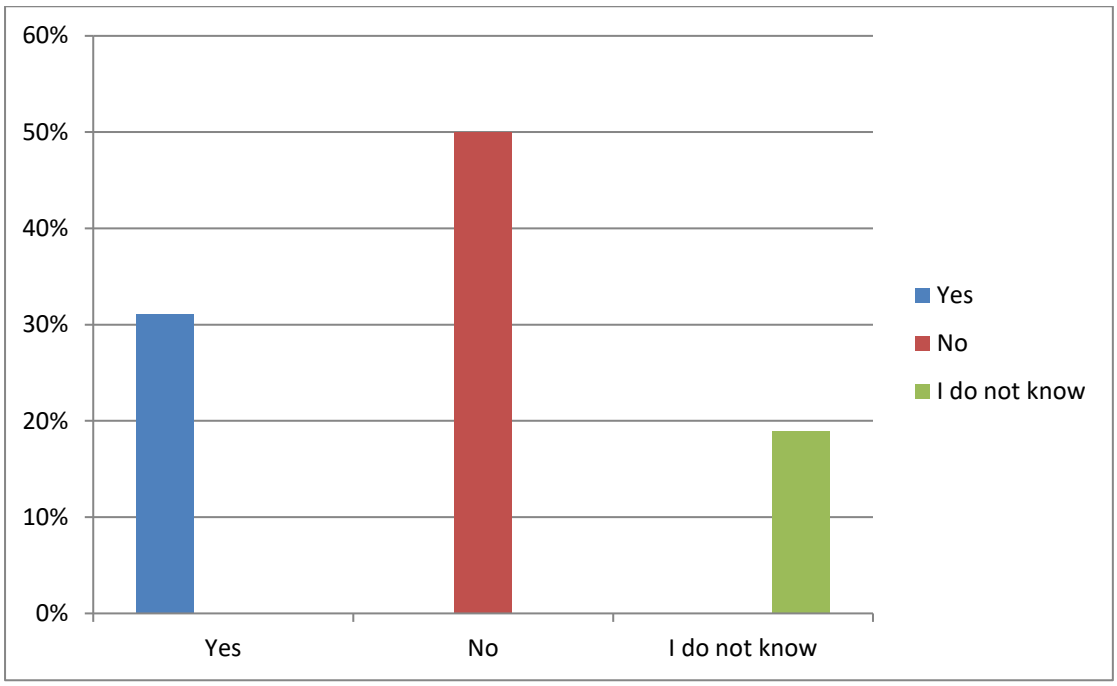

Figure (4-1-8): Showsthe percentage for Knowledge about necessary to wear the mask for children under the age of two years.

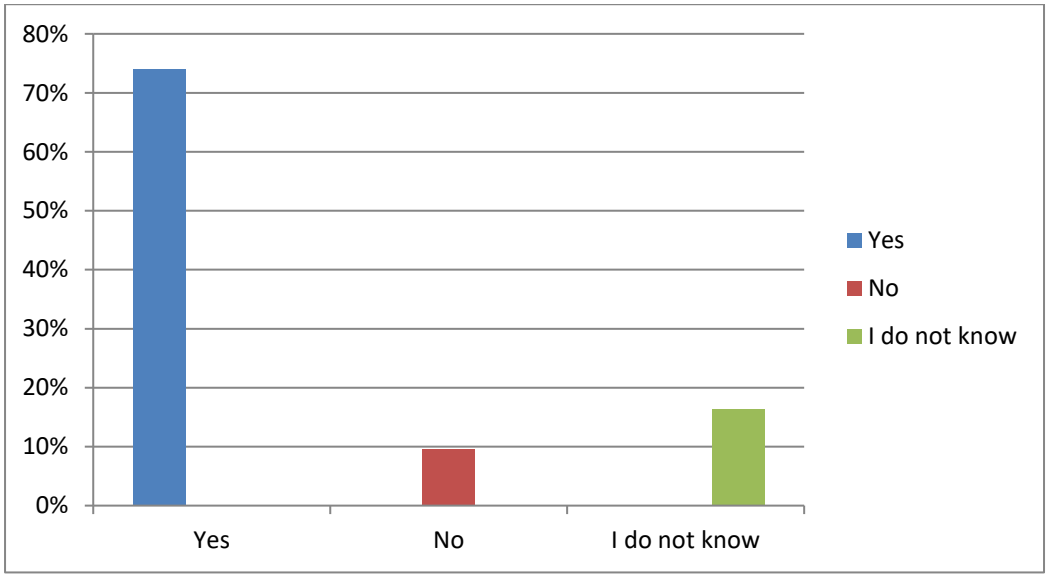

Figure (4-1-9): Showsthe percentage for Knowledge about possible to catch the infection from a person who does not show symptoms of the disease.

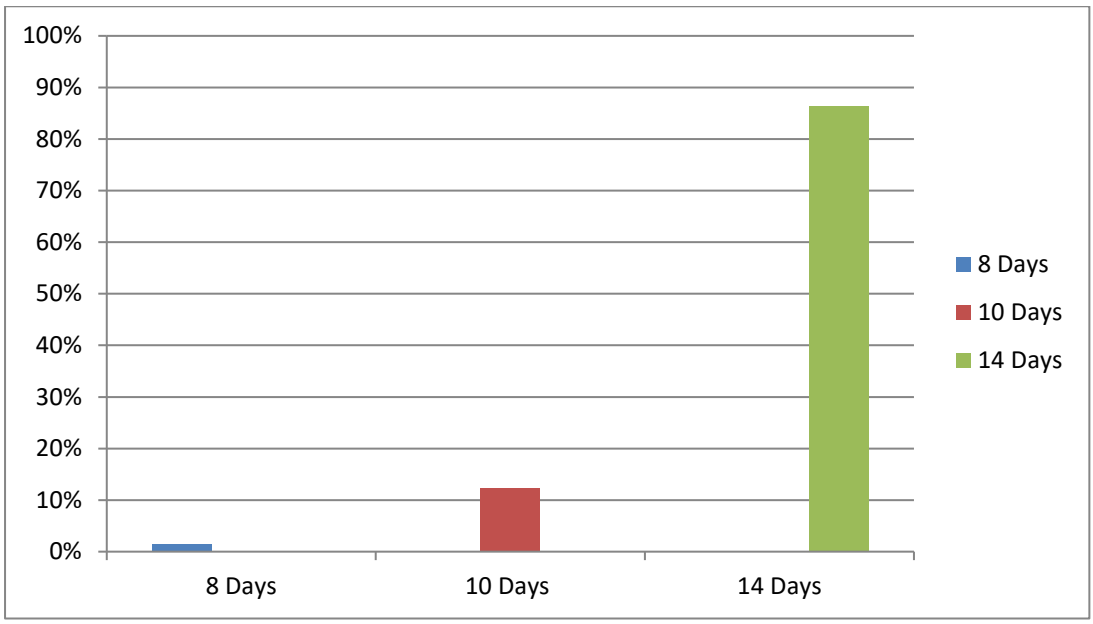

Figure (4-1-10):Showsthe percentage for Knowledge about the incubation period for the virus for an infected person / the isolation period authorized by MOH.

Table (4-2): Attitude of the radiology department students about the prevention of COVID-19:

the question
Do you currently practice other preventive measures, for example the use of sterilizers and disinfection of surfaces?
do you Cough/sneeze over the shoulder or elbow if a tissue or mask is not available?
Do you advice healthy people to wear masks to protect themselves?

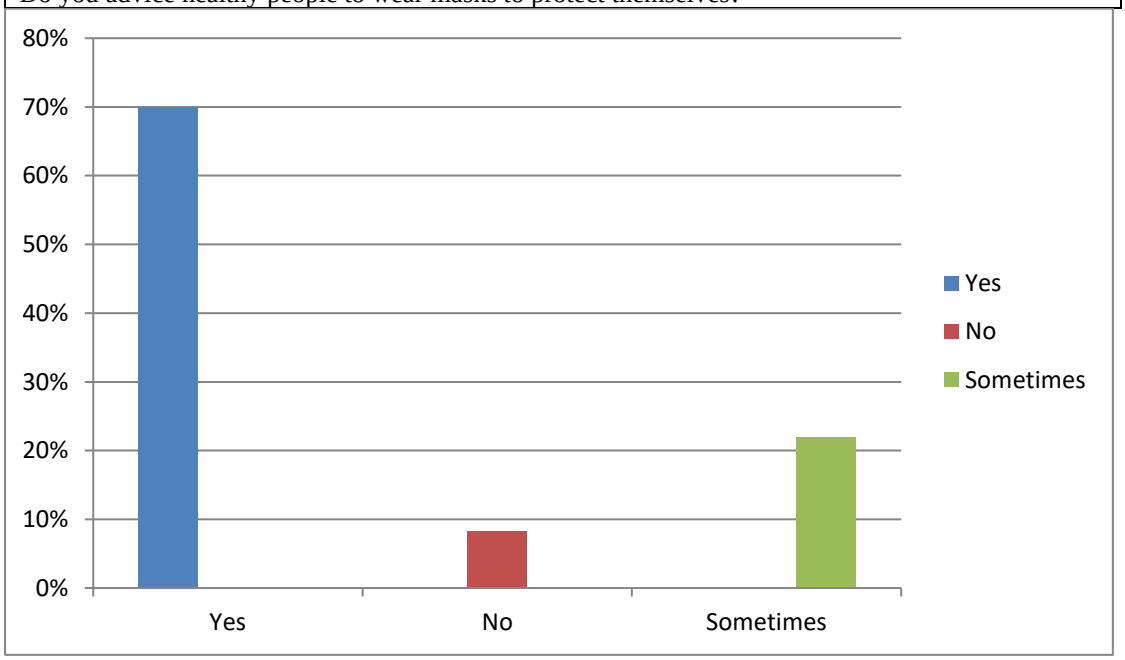

Figure (4-2-1): Showsthe percentage for attitude about currently practice other preventive measures, for example the use of sterilizers and disinfection of surfaces.

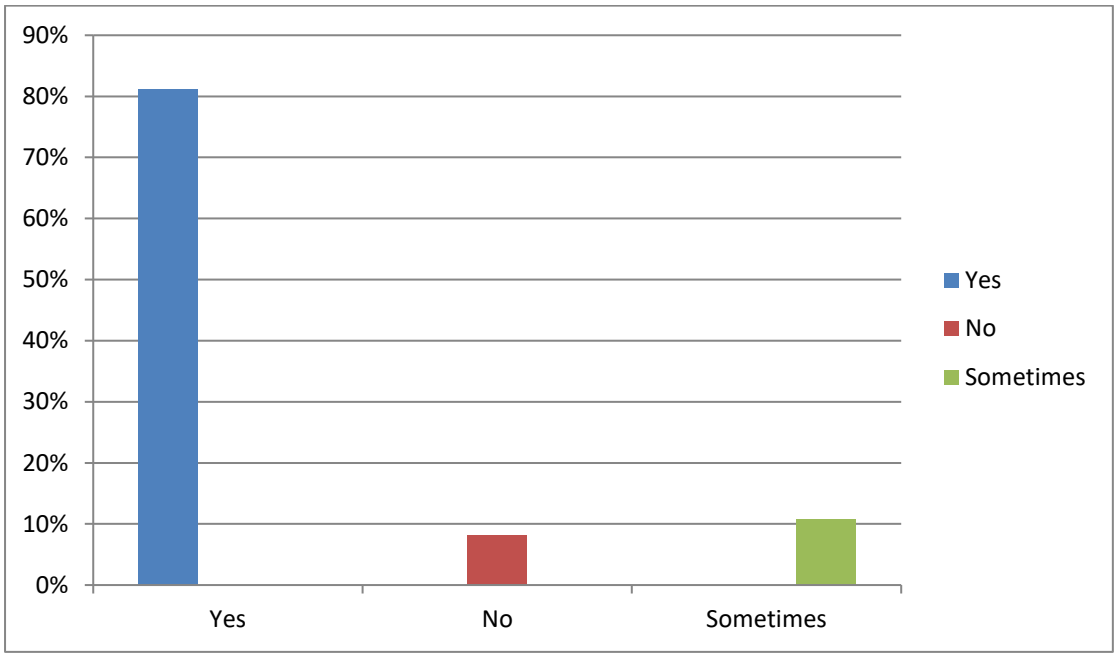

Figure (4-2-2): Shows the percentage for attitude about Cough/sneeze over the shoulder or elbow if a tissue or mask is not available.

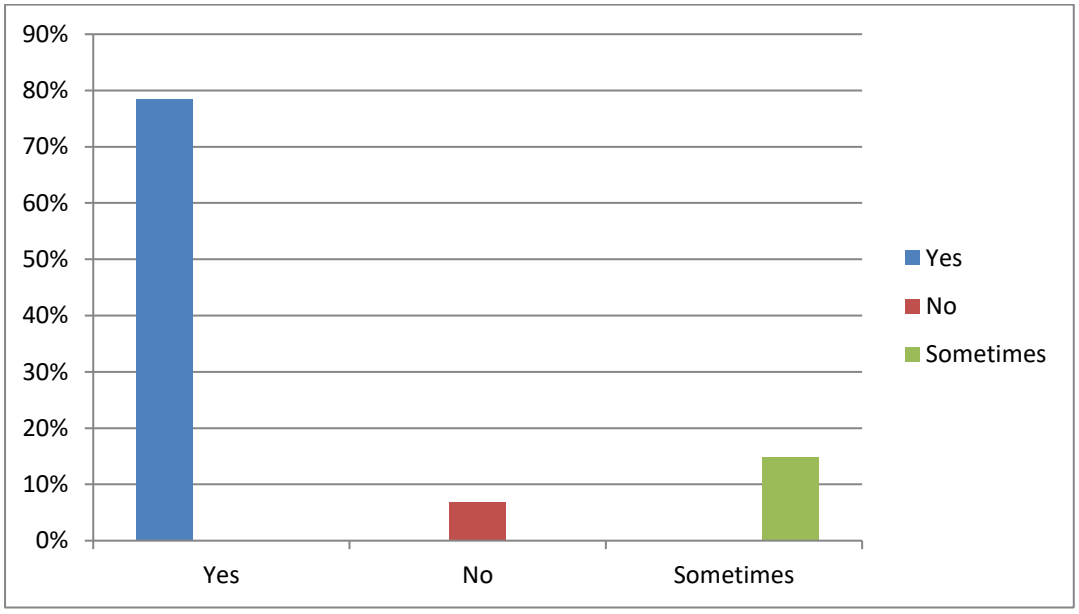

Figure (4-2-3): Showsthe percentage for attitude about advice healthy people to wear masks to protect themselves.

Chapter five: Discussion, conclusion and Recommendation

5.1 Discussion

This study was conducted on 74students (male and female) to evaluate knowledge, awareness and attitude toward COVID-19 among radiological department students in Najran University, Saudi Arabia, during the time period from September to November 2020.

Regarding figure (4-1) our study found that 37 Participate (50%) were males, and 37 (50%) Participate were females. The number of males participate is equal to the number of females. However, this result not agrees with study done by Hanady Elyas Othman, (2020), most of the participate in her study were female.

Regarding figure (4 - 2) our study found that 54 students (73%) at the age group 22-24 year and 20 students (27 %) at the group 25-27 year. Most of the participants ages were 22-24 years.

Regarding figure (4 - 3) our study found that28 students (37,6%)was level 9.

The result of figure (4-1-1) to (4-1-10) assess the degree of knowledge and awareness of all participants about COVID-19. According to our study the average score of COVID-19 knowledge was 72.86%. However, this result agrees with study done by Al-Hanawi, Mohammed K, et al ,2020, the majority of the study participants were knowledgeable about COVID-19.

In the figure (4-1-1) the participants were asked about Are you aware of the stander infection control precautions within the radiology department, most of the participants answered yes with high percentage was (77%).

In the figure (4-1-2) the participants were asked about do you have a sufficient knowledge about hand hygiene 91% answering yes, this is a high percentage. In the figure (4-1-3) the participants were asked about the minimum time needed for hand washing answering 20-30 second. In the figure (4-1-6) as it was evident from the result, there was also a low percentage (40%) for answering a question How much physical distance do you leave between you and others currently. in the Figure (4-1-10) the participants were asked about the incubation period for the virus for an infected person / the isolation period ,most of the participants answered 14 days with high percentage was (86.30%).In the figure (4-1-8) we found that result of the participants about is it, necessary to wear the mask for children under the age of two years they said no that degree of knowledge is low with 50%. most the students answered that yes Corona virus is easy to spread from one person to another, most students know that the Corona virus may spread to all family members if one of its members is infected , have knowledge of the guidelines set by the World Health Organization to deal with Corona sufferers or suspected patients and it is possible to become infected with someone without symptoms of the disease. According to the Saudi MOH by the middle April 2020, called on everyone to be careful to wash hands with soap and water, and leave enough distance, as it is the most important way to prevent Corona virus. And every person must wear a muzzle, whether medical, cloth, or tight-fitting cover over the nose and mouth, when leaving the house, with the exception of those who are alone in a closed place. [43]

In the figure (4-2-1) the participants were asked about do you currently practice other preventive measures, for example the use of sterilizers and disinfection of surfaces 69.9% said yes, they use.

In the figure (4-2-2) the participants were asked about do you Cough/sneeze over the shoulder or elbow if a tissue or mask is not available, they said yes about 81.1%, this is a high percentage. In the figure (4-2-3) show the grade of attitude participants to wear masks to protect themselves it was said yes 78.4% (positive attitude).

Contrasting these outcomes with Mohammed O et al that had a cross-sectional examination was directed in Makkah public medical clinics from September 2014 to April 2015. Around 281 participants who represented healthcare providers for his investigation. Data representing knowledge, attitudes and practices have been collected and recorded using questionnaires. The ages range from 21 to 57 years old. The greater part of them were females (57.7%) and 46.3% were nurses. His conclusion was only one-third of them (32.4%) obtained good knowledge about the infection and most of them (91.8%) demonstrated a negative attitude towards the infection. There are critical positive relationship between knowledge and both attitude and practice scores. The mean knowledge score was essentially higher among those with age ≥ 30 years, physicians, and those with > 10 years stretches of involvement, and the mean practice score was altogether more among females. Also, there are a knowledge hole and negative attitude among medical care suppliers at Makkah emergency clinics towards MERS-CoV contamination in spite of the fact that they announced great practices. [44]

5.2 Conclusion

This descriptive study is based on a questionnaire on 74 students to assess knowledge, awareness and attitude aboutCOVID-19 among students of the radiology department at Najran University concluded that:

The percentages were variable in knowing the correct distance between people, as the ratio between one and two meters was not great, most of them knew the health quarantine period, and this is a wonderful thing, as the quarantine period is very important to reduce the spread of infection, most of participants have knowledge of the guidelines set by the World Health Organization to deal with Corona sufferers or suspected patients, most of the participants answered yes to sufficient knowledge about hand hygiene and some participants answered yes about wearing a mask for children under the age of two, and this is dangerous for the child.

5.3 Recommendation

- They should be educated about wearing a mask for children under the age of two, as this advice is based on the safety and general interest of the child
- It is important to wash your hands for 20-30 seconds to reduce infection COVID-19
- 21.7% of the participants had their answer between no and sometimes to wear a mask for healthy people, they should be aware and educated on the importance of the mask
- Awareness of the safe distance between people is very important

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